have led him to the belief in the paired nature of the cyclostome nose, but they are curiously at variance with those of Von Kupffer that have lately led to the opposite conclusion. His remarks upon the functions of the thread-forming type of cutaneous gland are particularly welcome, in correlation with Weymouth Reid's work upon the origin and constitution of the thread substance. Concerning the ear, he records the striking result that while removal of one labyrinth leads to marked disturbances in the equilibrative function, on the removal of both ears all trace of such disturbance disappears. Morphologists and physiologists will await with interest the full edition of this important communication.

Lectures viii. and ix. are botanical, and as unequal in merit as any two in the whole work. One of them, by Prof. Muirhead Macfarlane, on "Irrito-contractility in Plants," is a record of some beautiful and striking experiments, a very charming one being that with a block of ice, from which he has drawn the conclusion that displacement of the *Oxalis* leaf under its action is the effect of cold and not of weight. The author reverts to his earlier observation, no less beautiful and striking, that in order to induce the closure of the *Dionæa* leaf the application of two successive stimuli within proper intervals is necessary. He deduces two leading principles—(1) that plants, like animals, being in a condition of protoplasmic continuity, are, by virtue of it, possessed of a power of general contractility; and (2) that the positions taken up by the *Oxalis* and other leaves under the action of the tropical sun are due to heat and not light effects. The other lecture, by Prof. W. P. Wilson, on "The Influence of External Conditions on Plant Life," contains little new, and is in part vague and unintelligible.

The volume closes with an illustrated report on "The Marine Biological Stations of Europe," by Dr. Bashford Dean, and an appendix on "The Work and the Aims of the Marine Biological Laboratory" at Wood's Holl, by Prof. Whitman, giving a list of close upon 100 papers produced under its auspices.

It cannot have escaped the reader's notice that the contents of the book are largely reports upon experimental work which bears directly upon the recent theories of Weismann, so popular in our own land. Contemporaneously with the labours of Wilson and Loeb, of which an account is given in its pages, the work of Driesch, Herbst, and others, which carries us back through that of Vejdovský, Chun, and Chabry, to the classical observation of Hæckel, now twenty-five years old, that detached portions of the fully segmented ovum (of the Siphonophoran *Crystallodes*) may give rise to young animals, have materially modified our conception of certain fundamentals of embryology. The observation that variation in development, "twinning," and other kindred phenomena, may bear a definite relationship to variation in temperature, chemical composition, and osmotic pressure of the surrounding medium, is now well established. The discovery that after the removal of either the micromeres or macromeres, the segmenting embryonic mass may still form a gastrula—that the differentiation of outer layer cells to form certain larval organs may be directly a question of location—and that certain blastomeres if separated at the two-celled stage may each give rise to an embryo one-half size, and if isolated at the four-celled stage to one of one-fourth size, is very extraordinary; and, viewing the situation generally, one is prone to ask where now *are* the said theories? Concerning them, Prof. Wilson replies "the fine spun thread . . . leads us little by little into an unknown region, so remote from the *terra firma* of observed fact that verification and disproof are alike impossible." The theories of Weismann were originally framed with the laudable desire of stimulating inquiry. They do not seek to explain the actual *modus operandi* of the hereditary process so much as to localise the seat of hereditary tendency and influence. The implication that neither proof nor disproof are possible, applies, for the matter of that, to even the theory of descent with modification *versus* that of special creation. The educated mind has, however, upon purely logical grounds, chosen between the alternatives in this instance, and it may be safely relied upon to do so in the other.

G. B. H.

NOTES.

The anniversary meeting of the Royal Society will be held on Friday, November 30.

At the first monthly meeting of the Royal Statistical Society for the present session, held on Tuesday afternoon, a gold Guy Medal was presented to Dr. Robert Giffen, C.B., F.R.S., in recognition of his long and exceptional services to statistical science.

M. Louis Figuier, who died on November 8, was an eminent populariser of the results of scientific research. He was born at Montpellier in 1819, where he took his degree of Doctor of Medicine in 1841. A few years later he became Professor of Pharmacy in the Paris École de Pharmacie. In 1850 he took his degree as Doctor of Science at Toulouse. He published some important memoirs on chemical subjects, but will be remembered chiefly for his numerous works on popular science. Since 1856, he issued every year the *Année Scientifique*, in which he summarised the most interesting and important scientific discoveries of the year.

The Manchester correspondent of the *Lancet* says that the sum of £783 10*s.* 3*d.* has been raised for the fund in memory of the late Prof. Milnes Marshall, and after expenses £760 2*s.* 3*d.* will be left. Of this sum £650 have been invested in Manchester Corporation Stock to provide for the maintenance of the Marshall Biological Library given to the Owens College by the relatives of Prof. Marshall, while £102 8*s.* 6*d.* have been similarly invested to provide a "Marshall Gold Medal" to be annually competed for at the Owens College athletic sports.

Dr. J. Scheiner, of the Potsdam Astro-Physical Observatory, has been appointed Extraordinary Professor in Berlin University.

A severe earthquake occurred on Friday last in Sicily and Southern Italy. The shocks were felt not only in the city and district of Messina, and several other places in Sicily, but also throughout the province of Reggio di Calabria, in Southern Italy. The disturbance was also recorded upon the seismic instruments at Rome and Ischia. Shocks of more or less violence were felt at Palmi, Seminara, Santa Eufemia, and San Procopio, in the province of Reggio di Calabria. The centre of the disturbance in this province appears to have been in the west, round the towns of Palmi and Bagnara. San Procopio, a town near Palmi, has been almost entirely destroyed, and it is estimated that at least two hundred persons have perished at that place alone. Since Friday the district of Reggio di Calabria has been slightly disturbed, but these tremors have not caused any further damage.

The Drapers' Company have contributed £20 to the funds of the Epping Forest Museum, now being formed in Queen Elizabeth's Lodge, Chingford, by the Essex Field Club, under the sanction of the Epping Forest Committee of the Corporation of London. The museum is intended to illustrate the natural history, antiquities, and scenery of this beautiful district.

The *Weekly Weather Report* of the 17th instant shows that in many districts the rainfall greatly exceeded the mean; over all the southern counties of England the amount was nearly four times as much as the average. The largest amounts recorded at individual stations during the week were 6·25 inches at Godmanstone (near Dorchester), 5·51 inches at Scilly, 5·13 inches at Killarney, and 4·70 inches at Falmouth, while 4·60 inches fell at Crowborough, Sussex, in six days. The rainfall since the beginning of the year has now exceeded the average in all districts, except the Midland Counties and the west coast of Scotland. The excess in the south of England and south of Ireland amounts to over five inches.

REPORTS in the medical papers show that the enthusiasm roused in France by the results of the anti-toxin treatment of diphtheria has by no means abated. We learn from the *British Medical Journal* that the administrative Society of the Sauveteurs de la Seine have presented M. Roux with the Grand Diplôme d'Honneur. The Var General Council has voted an equivalent of £40 for the Pasteur Institute, and £80 towards creating a similar institute at Marseilles. The Lille Municipal Council has declared for the erection of a diphtheria laboratory, and has opened a subscription in order to collect the necessary funds. The city of Lille has subscribed £1000. The Council has undertaken to furnish from £1400 to £1600 for a municipal bacteriological laboratory. The Havre municipality has voted £200 towards the cost of establishing a laboratory for the preparation of anti-diphtheric serum. The Paris correspondent of the *Lancet* reports that the Municipal Council of Paris has voted a subvention of fifteen thousand francs to the Pasteur Institute in aid of the preparation and distribution of anti-toxin. A sum of seven thousand six hundred francs has also been voted for the erection of accommodation for immune horses, and an allowance of fifteen hundred francs has been made to enable the institute to prepare and distribute anti-diphtheric serum during the present month and the month of December. In our own country, Sir Joseph Lister's appeal for funds has resulted in the sum of £850 being raised. It is estimated that at least £2000 will be required by the British Institute of Preventive Medicine in order to establish an installation for the manufacture of a sufficient quantity of the fluid to supply the demand.

A MARINE laboratory founded and maintained by a religious corporation, is probably unique of its kind; but such is the case with the Russian station on the island of Solowetzk, in the White Sea, as an interesting article in *Die Natur* informs us. From the early part of the fifteenth century Solowetzk or Holy Island has been the seat of an important monastery, but the foundation, in 1881, of a marine laboratory in connection with it was principally due to the efforts of Prof. R. Wagner, of St. Petersburg, and to the friendly offices of the late Archimandrite Mileti. The laboratory results from the conversion of a herring factory already existing there on a favourable site. It is now a convenient two-storied building, furnished with tank-room, museum, and six work-rooms with large windows, fully provided with all necessary utensils and reagents. Perpetual day is enjoyed from the middle of May to the middle of July, and during that period the energetic naturalist can work continuously with his microscope night and day, if he so pleases. A little fleet of sailing-boats is at the disposal of the station, but, owing to the uncertainty of the winds, a steam-launch is found to be a great desideratum. The attendants are selected from the peasants serving longer or shorter periods in the monastery, and the laboratory naturally suffers a good deal of inconvenience from the frequent changes which ensue. The director for some three years past has been M. Knipowitsch, whose local knowledge has considerably facilitated the researches of visiting naturalists. A long deep lagoon on the east of the island presents features of unusual interest to the biologist. Owing to its physical conformation the lower layers of water remain throughout the year at a constant low temperature, enabling such Arctic forms as *Yoldia arctica* to survive through the summer heat; while the warming of the tidal surface waters in summer favours the development of such forms as *Cyprina islandica*, and markedly hastens the development of medusæ such as *Cyanea* and *Aurelia*. Solowetzk may be reached from St. Petersburg either *viâ* Jaroslaw and Archangel, or, more directly, *viâ* the lakes, Povjonetz and Szumski.

CAPTAIN WIGGINS, who had left the Yenesei in the *Stjernen*, late in the season for England, has been wrecked in Yugor Strait, but a telegram from Archangel states that all on board are well. Particulars have not yet been received, but the fact points to a serious condition of the ice in the Kara Sea.

THE Christmas Lectures to Young People, arranged by the Royal Geographical Society, will this year be delivered by Dr. H. R. Mill. The course, entitled "Holiday Geography," will include four lectures, dealing respectively with maps as holiday companions; geographical pictures, with special reference to amateur photography; a neglected corner—the English lakes; and a geographical holiday on the edge of the Alps. The lectures will take place in the map-room of the Royal Geographical Society, and will be profusely illustrated by the lantern.

THE Royal Geographical Society initiated the new technical meetings for geographers on Monday afternoon, by the discussion of a paper on a pre-Columbian discovery of America, by Mr. Yule Oldham. The claim for the discovery of Brazil by a Portuguese navigator in 1447 was based on a map of Andrea Biancho prepared in 1448, on which an "authentic island 1500 miles west of Cape Verde" was shown. This evidence was supported by various additional arguments, including the St. Brandan's Island of Martin Behaim's globe of 1492. A very lively discussion ensued, in which Mr. E. G. Ravenstein, Mr. Payne, Mr. Beazeley, Dr. Schlichter, Mr. Delmar Morgan, and others took part. The general conclusion of the meeting was unfavourable to the view of the early discovery of Brazil, but all speakers united in expressing their admiration of the manner in which Mr. Oldham marshalled the facts and expounded his theory.

DR. ADOLF E. FORSTER, of Vienna, has made a very careful study of the temperature variations in the rivers of Central Europe, which has just been published in Prof. Penck's *Geographische Abhandlungen*. He has collected a great number of isolated sets of observations, in several cases extending over many years, which have been made by different observers on the main rivers and tributaries of the Vistula, Oder, Elbe, Weser, Rhine, Danube, Adige, Po, Rhone, Loire, Seine, and Thames. These are discussed in order to bring out the amount of diurnal range, the effect on the mean result of different methods of observations (including the effect of depth), the relation between the temperature of water and air in different classes of rivers, the annual march of river-temperature, the variability of water-temperature from the long-period means, the influence of ice, and various other factors, such as the effect of dynamical heating on account of fall from higher to lower levels. Dr. Forster recognises the necessity of farther observations of a strictly comparable kind in order to obtain sure results, especially with regard to the bearing of river-temperature on meteorology; but the results he has obtained are of great interest. He shows how the relation of air- and water-temperature depends on the character of the water-surface considered. In glacier-fed rivers the air is colder than the water only for four months in winter and early spring; in summer the maximum temperature of air and water coincides with the greatest excess of air-temperature. A similar though less marked relation holds good for mountain streams which are not fed by glaciers. In lakes and the outlets of lakes the air-temperature is higher than that of the water only during the four months during which heat is being stored, the curves crossing close to the maximum. In rivers flowing over plains, such as the Oder at Breslau, and the Marne at its junction with the Seine, the water-temperature remains throughout the year from one to three degrees Centigrade warmer than t [illegible])

HERR E. LECHER, in the *Wiener Berichte*, gives an account of an experiment he has performed to test whether when a magnet turns about its magnetic axis the lines of force remain at rest or turn with the magnet. A magnet is divided by an equatorial plane into two parts, which can turn independently. Under these circumstances it is possible, by means of suitable contact brushes, to obtain from the two extremities of the magnet an induced current of such a magnitude as cannot be explained by the cutting of the rotating lines of force by the extremely short brushes employed. These currents can be explained if we suppose, as did Faraday at one time, that a rotating magnet cuts its own lines of force which remain fixed in space.

MR. CARL BARUS, in the current number of the *American Journal of Science*, describes a simple chronograph pendulum which is likely to be very useful to those who have no break-circuit chronometer or seconds clock at their disposal. It is a simple mechanism by which an ordinary seconds pendulum is both kept in motion and made to record its oscillations on one or more chronographs sharply. The heavy metallic bob of the pendulum is electrically connected with the knife-edge, and its top is surmounted by a soft iron armature, which is attracted during part of the swing by an electromagnet, and thus kept in motion. A longer and very much lighter pendulum, consisting of a flat bob suspended by two wires, is suspended by the side of the first, and swings in the same plane, but with a longer period. As the heavy pendulum approaches it, it touches a platinum spring projecting from the other bob, makes current for a moment, and works the chronograph, and at the same time sends the current through the electromagnet. The contact is quite momentary, as the spring causes the wire pendulum to be hurled off ballistically. On its return it is brought to rest, without rebounding, by a stop, against which it leans till the seconds pendulum returns. The bob of the light pendulum is made up of two small square parallel plates, between which the wires and the platinum strip are clutched by a single central screw. A band of platinum foil is wrapped round the heavy bob, in order to ensure reliable electric contact. The chronographs and the electromagnet are connected in parallel. The records show that the time of contact does not reach 0·1 sec. It is desirable to use electromagnets of high resistance to prevent exhausting the battery.

PART I. of vol. vii. of *Cohn's Beiträge* is taken up with a long paper, by Dr. W. Rothert, on Heliotropism. He finds that the heliotropic stimulus received on one part may be transmitted to another part of the same organ, or even to a different organ, and there give rise to heliotropic curvature. The transmission can only take place in a basipetal direction, and its rate is always small; in favourable cases 2 cm. per hour. Contrary to Darwin's views, he believes that the whole region which is capable of heliotropic curvature, is also heliotropically sensitive, although this sensitiveness is often unequally distributed in the same region. In all cases of this unequal distribution, it is a small region at the apex of the organ which is distinguished by a greater sensitiveness, whilst the rest exhibits this sensitiveness often in a far less degree. Further, the author investigated the effects of cutting off the apex of the cotyledon of seedlings of grasses, and found that this gives rise to two independent phenomena: a diminution in the rate of growth of the base, and a complete suspension of its heliotropic and geotropic sensitiveness. Both these effects are, however, only temporary. It was also unexpectedly found that these effects are not consequent on every injury done to the cotyledon, but that large cuts made either into the apex, or even two semi-sections made below the apex from opposite sides of the organ, and only 2 mm. apart, do not cause the diminution in the rate of growth, nor the suspension of heliotropic and geotropic sensitiveness, but that this is only effected by the complete section of the cotyledon.

MESSRS. W. WESLEY AND SON'S "Natural History and Scientific Book Circular," No. 122, contains a full classified list of important works on botany.

THE thirteenth monthly part of "The Royal Natural History" (Frederick Warne and Co.), being the first part of the third volume of the work, has been published.

THE Royal College of Physicians, Edinburgh, has just issued the fifth volume of Reports from their Laboratory, edited by Drs. J. Batty Tuke and D. Noël Paton. The volume presents the results of investigations carried out during the past two years.

THE ninth number of the handy and useful *Alembic Club Reprints* (Edinburgh: W. F. Clay) is devoted to Davy's papers on the property and nature of "muriatic acid" and "oxymuriatic acid," published in the *Philosophical Transactions* between 1809 and 1818. Our readers need hardly be reminded that though Gay-Lussac and Thenard were inclined to believe in the elementary nature of the latter, it was Davy who established the correctness of this view. This reprint of the eight communications to the Royal Society, on his experiments to demonstrate the elementary nature of chlorine, will be valued by students of historical chemistry.

WE have received No. 6 of *The Scientific Roll*, conducted by A. Ramsay, and dealing with the baric condition of the atmosphere. This publication is intended to be a summary of what is known of this subject from the works of various writers, so that anyone may make himself acquainted with what has been written without obtaining and reading the original books, some of which are now difficult of access. The present number contains notes taken from Prof. Kämtz' *Vorlesungen über Meteorologie*, published in 1840, and translated into English by Mr. C. V. Walker in 1845. In addition to retaining the original scales, the author reduces all values to what he terms the "baric unit," which is taken as equivalent to one million pounds weight on the square mile. Thus one inch of mercury at 60° F., and under the ordinary pressure of sea-level, corresponds to 2000 such baric units, and a millimetre under the same conditions to 78·74 baric units.

PROF. LOTHAR MEYER communicates to the *Berichte* a warning note concerning the dangerous nature of explosive mixtures of acetylene and oxygen. It is a well-known fact, frequently demonstrated upon chemical lecture-tables, that detonating mixtures of hydrogen and oxygen, or of marsh gas, ethylene, or carbon monoxide and oxygen, may be ignited in an open glass cylinder without danger provided the vessel is not narrowed at the neck, which would be likely to cause undue pressure. Prof. Meyer states that he has frequently performed the experiment with the above gaseous mixtures, employing a strong straight glass cylinder four centimetres wide and with very thick base, without ever having experienced an accident. Upon performing the experiment recently, however, with a mixture of acetylene and two and a half to three times its volume of oxygen, igniting the gas by approaching the mouth of the cylinder to a flame, the cylinder was blown to innumerable fragments in his hand, happily and almost miraculously without injuring him, although unprotected by a cloth, and the report of the explosion was so loud as to deafen for a time those in the neighbourhood. It has long been known that acetylene explodes with oxygen in closed vessels with great violence, frequently destroying an eudiometer, but this remarkable destruction of an open cylinder is a new evidence of its disruptive force. In the year 1884 Prof. Meyer, in conjunction with Prof. Seubert, showed that the detonating mixture of acetylene and oxygen ignites at a lower pressure than all other combustible gases, a pressure equal to thirty-two millimetres of mercury being sufficient to enable it to explode, while hydrogen and oxygen require a pressure of at least one hundred millimetres, and carbon monoxide and oxygen over two hundred millimetres. This, however, is not sufficient to account for the enormous pressure developed in an open cylinder. Moreover, it cannot be due to the more rapid rate of propagation of the explosion, for M. Berthelot and Prof. Dixon have independently found that the rapidity in the case of the acetylene detonating mixture is but slightly greater than in the mixtures of oxygen with ethylene or marsh gas, and much less than in the case of a mixture of hydrogen and oxygen. Prof. Meyer suggests that the smaller amount of hydrogen contained in acetylene than the other hydrocarbons, resulting in the production of less water vapour and relatively more carbon dioxide, together with the fact that the theoretical temperature of the combustion calculated from existing thermal data, is extremely high in the case of acetylene, may afford some explanation of the extraordinary energy developed during the explosion of the latter.

A PURE white di-sulphide of tin has been obtained by Dr. Schmidt in the laboratory of the Berlin University, which is further distinguished by the property of being readily soluble in ammonium carbonate. It may easily be prepared as follows: Metallic tin is first dissolved in hydrochloric acid, and the stannous chloride oxidised by digestion with nitric acid to stannic chloride, and the excess of acid largely removed by evaporation. After dilution with water the tin is precipitated as the ordinary yellow sulphide by sulphuretted hydrogen. The washed precipitate is next freed from traces of arsenic by solution in concentrated hydrochloric acid and reprecipitating the diluted and filtered solution with sulphuretted hydrogen. The well-washed yellow precipitate is then digested with a large excess of ammonium hydrate for some days at the ordinary temperature, when the whole of it eventually dissolves except small traces of the black sulphides of lead and bismuth. Upon diluting the clear ammoniacal solution and neutralising it with dilute sulphuric acid, an almost perfectly white precipitate is obtained. This precipitate dissolves at once almost completely in ammonium carbonate, and upon again neutralising with dilute sulphuric acid the disulphide precipitated is pure white. This new form of stannic sulphide is very voluminous, and it apparently owes its absence of colour and greater bulk to the fact that stannic sulphide here exists either in a different state of molecular aggregation or of hydration. It is significant that upon drying it becomes amber-yellow and loses its property of dissolving in ammonium carbonate.

THE additions to the Zoological Society's Gardens during the past week include a Lesser White-nosed Monkey (*Cercopithecus petaurista*), a Pel's Owl (*Scotopelia peli*), an Angolan Vulture (*Gypohierax angolensis*), a Black Kite (*Milvus migrans*), a Buzzard (*Buteo*, sp. inc.) from West Africa, presented by Mr. C. B. Mitford; two —— Baboons (*Cynocephalus*, sp. inc.) from East Africa, presented by Mr. Charles Palmer; a Chilian Sea Eagle (*Geranoætus melanoleucus*) from South America, presented by the Rev. Fred L. Curne; two Bronze-winged Pigeons (*Phaps chalcoptera*) from Australia, presented by Mrs. Amy Jones; ten Surinam Toads (*Pipra americana*) from Surinam, presented by Mr. F. E. Blaauw; five Three-streaked Euprepes (*Euprepes trivittatus*) from South Africa, presented by Mr. J. E. Matcham: a Muscat Gazelle (*Gazella muscatensis*) from Muscat, an Echnida (*Echnida hystrix*) from New South Wales, deposited; four Lapwings (*Vanellus cristatus*), British, purchased.

OUR ASTRONOMICAL COLUMN.

OBSERVATIONS OF THE TRANSIT OF MERCURY.—Several French astronomers made preparations for observing the recent transit of Mercury across the sun, but the weather conditions on the other side of the Channel were just as unfavourable as they were here. The current *Comptes rendus* contains a brief note on the transit, by M. Trouvelot. This observer saw Mercury projected upon the sun at 4h. 12m. The planet was sharply defined, and appeared as a circular, intensely black, spot on the luminous background of the sun. In spite of careful observation, M. Trouvelot was unable to detect any trace of a luminous ring such as he observed round the planet during the transit of 1878. The unfavourable conditions of observation, however, are sufficient to explain the absence of the phenomenon.

Dr. Janssen also contributes a note on the transit of Mercury to *Comptes rendus*. He intended to look particularly for the "black-drop" observed during the transit of Venus in 1874, but clouds prevented the observation.

EPHEMERIS OF ENCKE'S COMET.—The following positions for Encke's Comet during this year are from an ephemeris given by Dr. O. Backlund in the *Astronomische Nachrichten*, No. 3263. The comet will pass perihelion on February 4, 1895. In the year 1862, its perihelion passage occurred on February 6.

Ephemeris for 0h. Berlin Mean Time.

1894.			R.A. app. h.	m.	s.		Decl. app. °	′	″
Nov.	22	...	22	35	54·79	...	+9	6	51·0
,,	24	...		33	25·02	...	8	40	53·6
,,	26	...		31	7·93	...	8	15	59·1
,,	28	...		29	3·11	...	7	52	9·1
,,	30	...		27	9·98	...	7	29	24·0
Dec.	2	...		25	28·18	...	7	7	43·2
,,	4	...		23	57·09	...	6	47	5·3
,,	6	...		22	36·02	...	6	27	27·9
,,	8	...		21	24·29	...	6	8	48·5
,,	10	...		20	21·19	...	5	51	3·6
,,	12	...		19	25·94	...	5	34	8·3
,,	14	...		18	37·75	...	5	17	57·7
,,	16	...		17	55·77	...	5	2	25·7
,,	18	...		17	19·11	...	4	47	25·7
,,	20	...		16	46·82	...	4	32	50·6
,,	22	...		16	17·82	...	4	18	32·0
,,	24	...		15	50·85	...	4	4	19·0
,,	26	...		15	24·59	...	3	49	59·2
,,	28	...		14	57·30	...	3	35	18·2
,,	30	...	22	14	27·09	...	+3	19	58·3

RECENT OBSERVATIONS OF JUPITER.—Prof. E. E. Barnard communicates to this month's *Astronomy aud Astro-Physics* an account of his recent observations of the great red spot and other markings on Jupiter. The following points with regard to these features are of interest to observers: "The surface of Jupiter is very strongly marked, during this opposition, by two broad reddish belts, one on each side of the equator, and a broad white belt between them at the equator. The great red spot is fairly distinct in outline, though quite pale—a feeble red. The great bay in the south equatorial belt north of the red spot is still persistent and well marked." Prof. Barnard has observed a number of small black and white spots in Jupiter's northern hemisphere. Two of these objects, a black and a white spot, can easily be seen opposite the great red spot on the planet's disc. Prof. Barnard's measures indicate that the white spot will be in conjunction with the dark one about the middle of January next year, but as the two objects are not exactly on the same parallel, they will only graze in passing one another. The black spot appears to have about the same rotation period of the great red spot. Numerous white spots have been observed in Jupiter's southern hemisphere. A few dusky markings have also been seen on the great white equatorial belt.

THE NEW CYPRESS OF NYASALAND.

IN the most easterly corner of the British Protectorate of Nyasaland, immediately south of Lake Shirwa (between 35° and 36° E. lat, and a little north of 16° S. lat.), lies the large isolated mountain-mass of Milanji. From the plains which surround it the land rises gradually to a height of about 3000 feet, and forms the lower spurs of the mountain. Above these outliers the mountain is carried up another 3000 feet in abrupt elevations, only broken in places where the larger streams flow down. This